

ABSTRACT

Disclosed is a power and start system for use with an aircraft engine having a shaft, systems requiring AC power and systems requiring DC power. The system includes an AC/DC starter/generator mechanically coupled to rotate in response to rotation of the engine shaft while the engine is operating in generate mode. Rotation of the starter/generator produces AC and DC power and operates to rotate the shaft of the engine when the engine is in start mode. The system includes a generator control unit which is electrically coupled to the AC/DC starter generator. The generator control unit is also electrically coupled to the systems requiring DC power. A start inverter is configured to be coupled to a DC power source. The start inverter is coupled to the AC/DC starter/generator to provide power for start mode operation. The disclosed system provides multiple levels of redundancy when in the event of a failure to any one or combination of components. Also, the system can be scaled for use with multiple engines to provide further redundancy and related reliability and the operation of the power and start systems.

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